S U R V I V A L S C R A P B O O K : DISSERTATION.

SYNOPSIS OF ARGUEMENT.

"Critising our present society through my intuitive experience and ideologically I feel that not only should there be research and development for an alternative society but also that from what we already know, there exists the possibility of living somehow else, starting even now; We should look to the fundementals of our living - our basic life supports.

Information should be collected, distributed and experiments made in reality.

The information should be produced in a form relevant to an alternative view of information ~~theory~~ dissemination and to stimulate practical experiments".

very unclear

another sentence needed.

STEFAN SZCELKUN. : 1972.

CONTENTS

SUMMARY OF ARGUMENT 1

CONTENTS 2

INTRODUCTION 3

PART 1 BACKGROUND 9

PART 2 CONTEXTUAL CRITIQUES 17 24

PART 3 SOME POSITIVE AIMS 27 41

PART 4 PROCESS AND LIMITATIONS 36 55

CONCLUSIONS 43 67

BIBLIOGRAPHY 53 78

NOTE: This dissertation should be read in conjunction with the studies entitled survival scrapbook 1 Shelter and Survival Scrapbook 2. Food.

INTRODUCTION

When ~~one is~~ you are wanting to reexamine the fundemental concepts of a broad discipline like architecture, where do ~~one~~ you start? Architecture has always grown from the existing culture. It has grown from the political, aesthetic and spiritual precepts of that culture. So it would seem that a study of the fundementals would be a study of the political, aesthetic and spiritual realities of the existing culture in an attempt to discern those points from which architecture arises. However there is something that is more basic to architecture than such a far ranging theoretical critique and that is the part of the architectural discipline that derives its form from the subconcious urges in every people who build to make their buildings pleasing to the senses and functionally workable at the same time.

At this stage some comments about what my understanding of what architecture is, are necessary. Taking it on one extreme only to be the selfconcious design of monumental art works by a professional body of men who hold an esoteric knowledge not closely related to the population as a whole, then buildings arising from the culture of the people for their everyday needs is not architecture.

I consider this to be a narrow view.

Architecture as a popular subject, including all who mould the built or landscaped parts of our environment, is a broader and more satisfying concept. It is one held by many renowned architects who have advised their students to study such fundemental expression.

Let me quote two of the all time greats as examples.

"The true basis for any serious study of the art of architecture lies with those indigenious more humble buildings everywhere that are to architecture what folklore is to literature or folksong to music and with which academic architects are seldom concerned .....

These many folk structures are of the soil, natural. Although often slight their virtue is intimately related to the environment and to the heart life of the people. Functions are usually truthfully conciseved and rendered invariably with natural feeling. Results are often beautiful and always instructive"

Frank Lloyd Wright.
The Sovereinty of the Individual.

"Architecture today is no longer concious of its own beginnings"

Corbusier
Towards a new architecture.

Such study then must be relevant to architecture in its broadest definition. Architecture as something to be known and controlled by everyone rather than an elitist group of professionals and their following critics and admirers. Fundemmntally reexamine with a broad band of the public, participating in the most effective manner possible.

The questions of research and presentation/ communication are one. The manner in which the research is made will determine the product. It is action that must follow the theory and the theoretical analysis should lead to practical suggestions (ancient chinese maxim.) so the presentation of any study will be most effective if it can suggest practical actions to people who are in a position to be able to take such actions. The reason such emphasis is placed on action is that experience of a real environmental situation is the ~~only~~ surely the best way to fully know, understand and ultimately change that situation.

The part of the population that can take things to such practical extremes is that section commonly known as discontented youth; or those of like mind (if not age) who can understand such experimental application.

Research should therefore be directed towards those who can make most effective use of it now. This does not mean that the study is not relevant to the population as a whole but only that research on the basic real levels can only be done by those who are physically able and mentally into it. The results of such experiments can be critically examined and reaffirmed on a broader scale. An example of how this process works may be seen in the communes of the western world from whose successes and failures, possibilities of a better

alternative life style might be seen by people as a whole.

It was stated in the first paragraph that a critical reassessment would need a broad cultural critique. Although I have tried to avoid detailed theoretical and ideological digressions of which I am not equipped to be usefully capable, certain biases are unavoidable. Everyone has their own cultural viewpoint which becomes evident in any action they make. Much of the following attempts to clarify my biases and give my arguement some rational, rather than a purely intuitive, basis.

The original idea of doing this work was not wholly the result of a logically or literally progressed ideology but arose from many experiences, interests and diverse information that has come to me as a generalist design student searching for a radical and wholistic approach to architectural design. The first section)) background discusses these interests.

The aims

As well as ~~its~~ origins ~~the aim~~ of the scrap book are multi various and unspecific. Talking generally it is possible to place its aims in a single context by saying that they all intend to service those who are looking for an alternative to our society as it now exists. The characteristics of society that lead me to believe reappraisal is urgently needed, are discussed in the next section ——— contextual critiques.

From these considerations aims for a study grew. And were rationalised into various points as the investigation proceeded. Guided on an intuitive level by an urge to supply a true view of something that seems self evidently basic and common to all people and yet was lacking. The next section states my aims and discusses each of them.

As has already been mentioned method cannot be separated from aim with a truly wholistic study. The process is a unity from concept to feedback and learning. The next section briefly discusses some of the more formative aspects of the processes involved.

Finally there is a concluding section and bibliography(~~referred to in the text by number~~)

BACKGROUND Part 1.

These are the areas of interest from which the study grew. Some roots and underlying reasons. Topics Discussed are; -

.....

* Public Facilities that are freely available the implications of such servicing.

* The vernacular and self - build What is the architects place.

* Bio-physical inter-relatedness off all things

* Information and control in everyday life.

*Alternative forms of life support.

* Resources and channels within our society for alternative development.

* Lack of basis for domestic architectural design.

Public facilities that are freely available

The implication of such servicing

When public services are provided free they often work well, even within the content of a competitive rather than co operative society. Such examples of distribution without barriers of money or barter lead me to conclude that it is not idealistic to work for a system in which the majority of services are available freely to those who have need of them. Examples of such services that operate now are, ——— libraries, beaches, public toilets, parts of the health service, museums and galleries, street lighting, bicycle riding, roads and pathways, the blood donation, parks, and gardens, drinking water fountains and so on.

In the United States of America one is paid money for donating blood supplies to the national blood bank. A comparative study of our blood donar system and the American one was carried out by Titmuss who found that the quality and quantity of the English blood bank was far greater than that of the American. This was attributed to the fact that with the American system poor people whose blood was, for one reason or another, not of very good quality would lie about previous illness and so on so that their blood would be accepted and they would get the money that they needed. The only reward system

walk around a town for a day and find this.

get the details of this from Chris Abel.

that operates in England, apart from the customary tea, biscuits and hour off work, is the abstract one of a feeling that one is contributing to something useful in society. Something that everybody understands they may need to use in the future sometime.

The implications of such findings are that people in a situation of sufficient supply will act in a self organising fashion if a suitable network and rich information services are available.

~~Notes — Project Free London. list of others. Implications. that people with sufficient for survival will act as a self regulating system.~~

An admiration of the vernacular aesthetic, with relation to traditional building forms and modern self-built shanties and their like.

~~How, the 'architect' can participate in this.~~

Britain has a complex geology with many kinds of rock. This gives rise to a variety of building material which in turn gave way to a rich vocabulary of traditional building forms derived from the most suitable materials of that district. Almost invariably the vernacular building fits well into the landscape and feels good. Even obviously ugly buildings of this type have a feeling of belonging that is comforting. Most of these admirable buildings were planned without architects of outside professional specialists and many of them out perform the average speculatively built architect designed chalet of today. For example the thick mud walls of a cornish cob cottage retain heat in the winter and are cool in the summer to a much greater extent than an 11½" cavity brick wall.

< details of radiant heat factor in here

The people who built these dwellings would most usually work closely with the land in the locality and be well aware of the potentials of locally available materials. Practice of forming shelters from such materials would be obtained in the

making of sheds and the like for agricultural and horticultural purposes, this practice is still to be seen on allotments nowadays where the allotment holder puts up stores of all kinds of locally available materials.

A recent experience that I had which ties in closely with these is the discovery of a shanty village just outside Overton near Newcastle in County Durham. There were nearly one hundred houses all built by various people from all kinds of common materials. Many were based on a structure that was once mobile, such as the old type of fairground caravan. These had been extended in all manner of ways, patios, verandas, leantos', solars, and so on had been added. The range of forms and colourschhemes that had been devised was truly extroidinary and gave me a great deal of faith in the ability of modern man to fashion his house with as much skill and arts as people of old.

examples — shepperton, Swansea valleys.

p.s. A small selection of colour slides showing this place is available on loan from the AA slide library.

Inter relatedness of all things. Ecological awareness. How it is useless (or at least dangerous) to study one discrete subject i.e. fundemental shelter)on its own. (out of context.)

.....

Rigid categories can only lead to conflict in area for which the category does not hold completely true. Categories are artificially constructed groupings of things that help us understand the world and communication with others. So categories as an artificial aid should be used when they are useful. Architecture arises from the construction of buildings for various purposes. The buildings are intimately connected with their purpose and infact until modern times is intimately connected with its local eco system. This when looking at buildings on a fundemental level it is important to explore adjacent phenomena. This feeling of interrelatedness is not easy to communicate in words and at one level it is almost a spiritual faith. The buddhist writtures articulate this concept most clearly and it has re-emerged in recent years from the study of ecology where it can be seen in more practical ways. A change in one part of the world has repercussions throughout. The role of any specialist is only a vehicle to be used as convenient and it always seemed dangerous to regard architecture as something separate from life as a whole, which is talked

about in an architectural jargon. What seems to me to be more worthy of lifelong pursuit is an architecture that is derived from the mores of everyday life. An architecture that belongs to people because it is produced by them and controlled by them. I see the role of the 'architect' as a stimulator and experimenter, explorer and inspector. Someone able to develop possible forms and techniques farther and farther.

People having the possibility of having more control/say in their everyday lives, with particular regard to information.

.....

Could people handle the information necessary to comprehend and gain control of their everyday life or is it necessary to have specialists and experts to interpret our everyday needs in terms of our technology? The critical question here is surely the level of technology. It is well known how everyone built his own dwelling in the old days and if he did'nt do the job completely himself then it was a <u>local</u> craftsman who idid. If the level of technology is designed to minimise the need for specialisation for its use and maintanance , then the community as a whole may take part in the operation of the technology. The division of labour and knowledge may be reduced. Labour and information would ideally have the following characteristics.

1. flexibility during seasonal changes and after technical innovations or cultural reorientation.
2. Possibility for individuals to do work they enjoy most of the time and be creatively involved in their work.
3. Maintenance of sufficient production.
4. Sharing of chores and unpopular work.

The information distribution involved here is not at all intenably complex as it at first might seem. The basis is the support of every day life functions. The information required so that people might render themselves useful within these functions, is not large compared with the complexity of an average real task (e.g. getting across a city) and the numerous facts and figures learnt off by heart during the usual 10 year minimum schooling period. The skills which people would acquire might cover such areas as.

Shelter building.

Food growing, rearing, gathering and hunting food processing.

Utensil and tool manufacture.

Simple basic workshop practice.

Information systems.

Organisation and managereal systems.

Fire/heating and ventilation energy management.

Medicine.

These would not be distinctly separated areas but interlocking. Thus when study shelter, information handling, organisation and self management, and its relation to food and all sheltered activities would be considered.

It may be seen that information is the key factor in the evolution of such alternative communities. Information is not just news, facts and figures but all the influences, communications, understandings and relationships which link society.

Complex systems in dynamic equilibrium are characterised by a rich flow of information. Thus a systems 'capacity to process information in a variety of ways will define its dynamic stability. This implies an information network with many linkage and no isolated parts.

A stable community will have much information movement to which any one individual may have very little knowledge. After some time these movements of information become evident as social cultural processes which both effect and take shape from the behaviour of individuals, and their relationhip with the environment. These processes serve to make the community responsive to wholistic changes, as a channel for co-ordinative processes on different time scales.

Information produced before such network based society comes into being will act as a symbolic model of the processes involved and might if constructed well catalyse understanding of the potential of such a situation and eventually precipitate action towards change by small groups who are able to harness the necessary resources.

What forms of shelter and food production are available either novel of traditional to a person/group reforming their culture.

.....

Novel techniques had always excited me. It is only recently that I have come to be disillusioned with innovation for its own sake. To the naive, novelty seems to offer hope, to promise better things; but usually, of course, as the novelty wears thin and disadvantages become evident in practice, one becomes aware that improving things or making a fine structure is not as simple a process as one of idea and invention. There have been a million and more ideas and inventions in as many fields of study in the past millennium. We have a vast store of this treasure but we have not learnt how to use it best. I'm not saying that invention is bad but the right application of the finest technology and ~~wide~~ology that we have developed ~~most~~ to this date is what is most important. We are capable if we did this, of providing good living conditions for everyone on the earth. A whole world full of people feeling well, fed, sheltered, and in control of their lives would provide so much creative potential that they could almost do anything.

Pioneer attempts at alternatives life style have, however, a special use for novelty. It can symbolise their breakaway, the new start. The geodisic dome with all its difficulties as a practical technique, seems to fulfill its function. The geometric symetry of the circle giving adequate expression to an urge for a tight and more integrated life within our biosphere, within our cosmos, within ourselves.

Resources and channels within our society for alternative developments.

.....

The style and technique of our present life support processes is controlled by a complex codified set of restraints such as planning permission, health regulation, property law and so on.
To discover in what ares and in what conditions one is allowed to experiment with alternative life styles these restraints must be studied.
These are not just a simple matter of good and evil but are complexly derived from the characteristics of the existing culture in order to protect and conserve it.
An example of an area for experiment with the Law is squatting. Until the efforts of an amateur lawyer Ron Bailey a few years ago little was known about squatters rights. As it happens English law to some exactly unmeasured extent allows empty houses to be squatted temporarily without first getting the landlords consent. There are now approximately one thousand homeless squatting in London, experimenting in all sorts of ways with self help methods of renovating and servicing derelict houses. Most of them in the Camden area.
Inignorance of the legalities surrounding many fundemental living issures seem hopelessly restrictive; but when you look into it there are many things possible if a knowledge of the law is gained so that you don't bark up the wrong tree (i.e illegal)

A feeling that their was a lack of a solid basis for the architectural design of domestic buildings

Having studied architecture for three years at college and for one year in practice I felt somewhat disapointed. In some very basic way my knowledge of what I was doing was unfounded.
Although I had learned many facts and theories about the external appearance, internal design and structural workings of buildings, I had little idea about why I was doing this, what the whole concept of a building was about and why people needed them. Now as Rappaport has pointed out, the need for a building perhaps did not arise from the need for shelter and at least the two cannot be taken as synonymous. However, most of the buildings existing in the world appear to be used as shelters of some kind. So what was this need for shelter!
Obviously it was bound up with the whole of basic physical and physcological needs of surviving on the earth. So I decided that one thing I should study was 'basic life supports'.

The first question to answer was what consisted of man's basic survival needs. Now, in a temperate region such as this the first thing man will die of exposed to survival conditions if we for the moment take air for granted, is

loss of body heat, hypothemia. So obviously conservation of the body heat and 'body comfort' came first. So the first part of my study looked at these things under the general heading of 'shelter'. The next most important requirements are water, then food. So the question of nourishment comes next (in which we might include the need for air). Now with these things man can survive but to develop from the animal-like existence he must use his gift for creating tools to produce energy to develop his needs. It became obvious very soon that this was not a simple category at all, so I limited myself to the use of energy as physical power. How can we fulfill these needs on the most basic and direct personal and group level. It became clear at this stagem after a few short expeditions to find out what was available on this subject, that nothing much was. The information seemed scattered widely around.

CONTEXTUAL CRITIQUES

Alternative? Alternative to what? Why should we need it? Here follow some of the reasons why I consider it necessary.
This includes sections on .....

.....

* Modes of organisation and administration

*High energy consumption. the dangers inherent.

*Value relating to selling power is it a suitable economic.

*Mono cultural tendencies.

* Cultural enforcement.

*Relate to the earth!

*Non-Renewable Resource Conservation.

Modes of organisation and administration.

Our society is characterised at the present time by a dominance of pyramidical forms of organisation. Thus decisions effecting many at the base are taken by a small number of controllers at the top. This sort of organisation involves much communication between top and base if it is not to become a dictatorial form of organisation. Because the communication has to be sifted as it moves through the pyramid so that it is available in a comprehendible. form to the controllers, bureaucracy tends to develop. i.e. speed of communication slows up, mistakes multiply, records increase, paper work becomes complex. To avoid stagnation becauseof these administrative difficulties there are attempts at improving the administrative efficiency which usually involve simplification and centralisation. but These characteristics lessen the responsiveness of the organisation to environmental changes and reduce the effective control of the base.

There are forms of organisation that avoids these difficulties and would seem more relevant to us especially in a time of accelerating change. ?

These are known as networks. In this form of organisation spread out groups have a great deal of autonomy but have many linkages with each other.

John MacEwan a computer programmer describes the characteriestics of a network: "Here we have a system of large variety sufficent to cope with a complex, unpredictable environment. Its characteristics are changing structure, modifying itself under continual feedback from the environment, exhibiting redundancy of potential command and involving complex interlocking control structures. Learning and decision making are distributed throughout the system, denser perhaps in some areas than others".

An illustration now networks organisations might allow self government can be made in discussing how to stabilise the population.

If society as a whole accepts that a low growth or stable population is necessary, agreement on restrictions are part of the sophisticated information system through which concensus is achieved. Customary primitive societies self regulated their population on a community level. A community with this capacity would be truly self organising. Every member makes small adjustments to his own behaviour with regard to the behaviour of others, but it is impossible to identify the behaviour of the whole system with any of its pats. This could happen through the use of symbols such

as the wearing of some differentiating dress or garment by pregnant women. The point is that regardless of their conceptual systems the individuals of community should be capable of perceiving that population size effects the whole range of activities and behaviour patterns and in this sense children belong to the whole community.

This kind of control could work as regards planning for the built world, and food production . It is within this kind of information rich political context that I see the full potential of an exploration of our basic needs developing with the participation of everyone. Until such systems become possible experiments must be eletist rather that wholistically real at least to some extent.

High Energy Level/Consumption

The Energy consumption of western industrial society is not only high at present but is spiralling higher and higher.

Primitive acricultural	per capital	energy consumption
Modern "	" "	10,000 K,cal per day
Industrial Revolution Britain	"	25,000 K,cal per day
U.S.A. 1970	" "	70,000 K,cal per day
		230,000 K,cal per day

High energy production techniques almost invariably produce high pollution levels, if you take the term pollution as being effective in the aesthetic realm and also applicable to the quality of life. This is because of the centralist nature of our industrial organisation, centralised because of ~~the centralist nature of our industrialist organisation~~, centralised because of the necessity for economics efficiency, Greater concentrations of power in single places inevitably lend themselves to inhuman scale, lack of control by the local people and danger of catastrophe.

The energy industry like all other business has a vested interest in encouraging continued expansion of consumption.

The demand for electrical power has doubled in the U.S.A every decade since 1940. At this growth rate production of energy by traditional fossil burning fuel methods will produce an unimaginable level of atmospheric pollution whilst if we speed

up the atomic reactor programme, we will have the attendant dangers of a hurried and little tested but highly dangerous process. The only answer seems to be stabilise, reduce our energy consumption, decentralise. There is little justification for needing such a high growth rate; nobody would believe that the standard of living has also doubled every decade since 1940.

Small scale localised, do it yourself technologys although not the most simply efficient. (i.e energy used to production gained) are certainly the most stable, responsive and non pollutive. They may also take advantage of localised conditions and integrate closely with the local eco systems, to be the most efficient wholistically.

Money Economy. Value relates to selling power

Commercialism, in its contemporary capitalist sense, insidiously destroys the true values of things and services as they relate to our needs. It is not need but desire that commerce fulfills. The whims of fashion shape peoples desires. Fashion is at best an elitist response to changing conditions and at worst the robot performer of the advertising industry. Advertising is controlled by profit. Profit makes wealth and, as we all know, six percent of the people own 80% of the wealth.

Commercialists will sell anything that people will snap up in ignorance if it gives them a fat profit. Commercialism does not interest itself in the deepest needs and aspirations of people, its play is for a fast buck; short sighted it will even profit from processes that are poisoning the whole planet. The people in commerce knoww but the people don't know.

What is necessary is for us to develop an economic system that relates more closely to <u>needs</u>, is planned in a larger term and does not obstruct information flow by the nature of its self interest.

You may well say that man is naturally selfish but surely, even taking this to be so, it is foolish to have a system which reinforces this characteristic and allows one man to exploit another over a wide area. The key to this change is information. People that are well informed about the possibilities open to them and the effects and implications of these possibilites will choose with their own survival as one of their foremost criteria. They will naturally be self organising.

Mono cultural Tendency.

The old open fire had its disadvantages of draughts, danger, localised heat, smoke, mess, deliveries of fuel, and its advantages of flicker, smell, dancing shadows, ritual, visual beauty, air charges. A modern underflow heating system has few advantages or disadvantages like this, it just supplies an even heat; you soon forget about it.

The open fire, the primitive technology, provides a rich and subtly varying experience that relates closely to fundemental life processes, whilst with the modern underfloor heating you soon forget about it.

I would suggest that here is a principle that is all to common with 'technological progress'. Efficiency is improved at the expense of quality of experience.

With food a similar impoverishment in experience, is evident, Your grandmother might remember curing family ills with plants from common hedge rows and there are berries, nuts and roots growing wild in England with the most extraordinary beautiful qualities which most people have never even tasted let alone gathered for themselves.

It is often said that there is great variety offered by our society, it is the often kind of variety typified in the American supermarket where there are 35 varieties of bread but all of them are sliced/wrapped white.

Mono cultural is to suggest a lack of rich cultural diversity within the ritual of our everyday life.

and a cultural that is nationalist and omni-present rather that responsive to the local ecosystem and adaptive.

Cultural Enforcement
666.....

The importance our society places in gaining a cultural monopoly may be shown by quoting an example of a fringe culture that attempts to exist with the dominant culture without developing the defences of a ghetto and how it is put down. The minority group known as travellers and gypsies have always been persecuted but never more effectively than in the present day.

The Government Report called gypsies and other travellers. HMSO 1967. admits that the gypsy type of namadic lifestyle has, since the war been virtually outlawed in England. Special sites that have been provided are insensitively planned and are seen as a temporary measure to settle travellers before they can be moved to an ordinary house.

Quoting from the government report.

"The Gypsy Council have put this (the enforcement question) more forcibly sometimes we just stop somewhere in the morning to have breakfast. The police come along and make us move on; they take us to the end of their beat and there is another lot who take us to the end of their beat and so it goes on till we are run into the next countyy At times like that we can't make a living; we can't wash; we get no change even to cook and eat. This is hell on earth; the worst kind of police state and not at all the sort of fair play Englishmen like to bring about".

This is another aspect of the monocultural tendency of our society; cultural control by brute force rather than by the more subtle and locally responsive mechanisms which would operate with the dispersed controller of network organisation.

Little ralation to soil (NATURE)

It would seem probable that the human race is moving, gradually and chaotically away from a basis in the soil. Moving irreversibly and without conciousness or foresight towards a situation in which it must develop and sustain its existance by artificially manufactured means. Leading ecologists believe that the world eco-systems will breakdown within the next thirty years and the biosphere as we know it will rapidly end. The signs of this trend are irrefutable. The cause of this, lie in the breakdown of societies cultural integration and close involvement with the natural rythmns of plant growth and seasonal change; from whence its existence is based. The profit orientation of industrialisation and the subsequent subordination of the working man under an increasingly bureaucratic political power structure, lead to a 'short term' view and isolation of the individual. The old folk cultures fell to ruin as profiteering mechanisations crushed its subtle relationships with the environment. The traditional mass cultures were ignored if they did not give quick and concise economic or scientific self justification.

Therefore instead of a gradual development and integration of the new energy forms with the old; we entered an age of technological chaos. Due mainly to the beneficial effects of scientific medical progress the world population accelerated at an unprecidented and alarming rate, which lead to attempts to feed more and more people, whilst paying increasingly less attention to the land. This necessitated the artificial stimulation of plant growth. The soil bio-structure was unbalanced and is becoming barren in many areas. If the process of rising population and rape of the earth continues without any large scale development of alternative systems of survival, most of humanity must starve by the beginning of the next century. Whether the survivors of the cataclysm develop an artificial life support system or an incredible global change of conciousness saves the earth, it is important that the culture that develops in such a situation is aware of its landscape. Its basis and fundemental substance. Whether this landscape consists of sun, wind, water, earth, and organism or of the atomic reactor and chemically synthesised nutritional tablets or a harmonious fusion of both, a clear expression of the awareness and involvement with this basis in it s common cultural evolution is essential.

"It is a question of relationship. We must get back into relation, vivid and nourishing relation to the cosmos and the universe. The way is through daily ritual and the re awakening. We must once more practice the ritual of dawn and noon and sunset, the ritual of the kindling fire and pouring water, the ritual of the first breath and the last. This is an affair of the individual and household, a ritual of day. The ritual of the moon in her phases, of the morning star and the evening star is for men and women seperate. Then the ritual of the seasons, with the Drama and Passion of the soul embodied in procession and dances; this is for the community, an act of men and women, a whole community in togetherness. And the ritual of the great events in the year, of stars, for nature and whole people. To these rituals we must return. Or we must evolve them to suit our needs. For truth is we are perishing for lack of fulfillment of our greater needs; we are cut off from the great sources of our inward nourishment and renewal, sources which flow eternally in the universe. Vitally the human race is dying. It is like a great uprooted tree, with its roots in the air. We must plant ourselves again in the universe."

A Propos Lady Chatterlys Lover.

D.H. Lawrence London 1930.

Use of Non-renewable resources in a manner that does not maximise their potential

The high energy consumption industry uses non renewable resources in the long term hope (rarely discussed) that by the time they run out. (very soon for such things as oil and copper) other things will be found to replace them. This implies a great deal of faith in the synthetic industry or a haphazard change in life styles. The further one progresses from natural systems the more complex are the implications of changes that such synthetic materials have on the environment. Due to its great variance and network type organisation nature has a great deal of resilience in the face of change or disaster. Synthetic systems are greatly simplified and are much more vulnerable in themselves; and because they have been produced quickly, rather than evolved over a great number of years, their impact on other systems within which they exist is little known.

The point here is that we should be very careful about conserving our biosphere as even if we prefer the plastic life style we are not at all certain as yet if it will work safely for a long period.

The use of non renewable resources in this 'living dangerously' manner is typical of our technological culture in its maniacal rush to produce more and 'progress' to greater technological peaks with out due consideration of what is needed. It is often true that a small amount of high technology will make a nature based technology go much farther. For example the possibilities of wood are vastly increased by the uses of nails, glue, saws, etc. What is needed is an awareness of the dangers of rushing <u>too fast</u> with technology progress built into our criteria, so that we can decide what materials to use and how we are to work them.

Part 3. Some Positive aims.

* To stimulate interest in basic Life Supports.

* To suggest ecological sound production techniques

* To use an information retrieval system
that is a model of its objectives.

* To give an idea of the complexity and costs.
involved wherever possible.

* Not for passive cosumption.

* To avoid premature analysis

* To provide the beginnings (implied)
of an exploration of basic physical
survival needs.

To stimulate interest in shelter forms and food productions techniques other than those available within our present culture.

The proposal of shelter and food production techniques that can actually be operated now by ordinary people is a symbolic gesture. It represents the need to be realistic and yet at the tim not dogmatic or pendantic, and the need for experimental ground that can be activated by people generally and not the specialists only. Critique of the accepted norm with practical action is so much more powerful than an idealogically argued case. Even if the produced alternative is rough and ready it can easily be comprehended and seen as a made and controlled by those who live there. It represents the cradle of an idea. Its beauty is not necessarily that interest of form but a political aesthetic. An appreciation of the range of control and expression possible to the user conveyed through broad based contextual information supplied not only by form and material but also by the environmental and social position in relation to the main culture. These forms may not be the made with techniques which are actually used by an ecologically stable culture but they are worthwhile exploring for the <u>principles</u> inherent with them and as models to activate the creative potential of all people.

To provide alternative house and food production techniques that are ecologically sound.

.....

Characteristics of ecologically sound technology are that:-

1. Local resources should be exploited where possible and imparted resources kept to a minimum.

2. The technology should, on the whole be able to be operated by unskilled or semi-skilled labour. Highly skilled operation should be cut to a minimim.

3. Process open and understandable by all.
as regards external economics.

4. Production costs should be low although the processes involved will probably be more labour intensive.

5. Low levels of pollution.

6. Processes of production are enjoyable rather than monotonous or dull.

7. small community may become practically autonomous.

Different techniques will show these characteristics to a greater or lesser degree for instance it is not intended to completely cut out plastic materials because although they are imported, and pollutive they are also easily used by unskilled labour which can produc effective results with small amounts. Infact it woul be contradictory (and wihtise even) to exclude any particular techniques in these early stages. As gross conditions change individual parts of the system will modify theselves to the image of the whole. At that time substitutes will be found or changes made, but untill this natural selection takes place all posible possibilities are possible.

To use an information system that is relevent to its network objectives.

.....

I wanted to experiment with the presentation of information in a system from which it could be retreived but in which it is not rigidly held and which suggests further additions and rearrangements by the user and provides leads for further investigation. If I am to seriously propose an increase in peoples level of involvement, commitment and integration with their daily lives on every level then I should start with what I am doing. In this case the information media itself. How could I present the information in the most responsive manner?
The difficulty lay with the integrating of system with a media technique, offset litho printing in this instance. e.g. the machine prints a particular number (16 in my case) of sides at a time so to be reasonable economic any colour coding should be in blocks of that number. Also the folding and binding is done on machines with limited flexibility so that splitting sections could only be done in particular ways. Such limitations put thedesign of the information system on a very realistic production basis.

Colour coding in blocks of pages gives immediate access from a closed state if a colour strip is run along the outer edge.

The colour code running concurrently with a chapter symbol (in shelter) or varying within the colour areas (in food) suggests the general area of information involved. A 'contents' diagram refers to pages by descriptive key words which are grouped under chapter symbols. These key words can reappear with the area symbols in the lower outside corner of the page so that by flicking through a particular page may be quickly found.

This means that rearrangements of the material can be made without to much confusion of content.

The arguement implied within such organisation is simultaneous rather than linear and reflects the network ideology discussed previously. Rearrangements produce interaction as different information appears together at random or is intelligently reordered.

The information so constructed is a model of its objectives.

To provide leads for further investigations it was important to concentrate on making as comprehensive a bibliography as possible. It would have to contain full references to each book, giving enough information for the book to be obtained through inter-library loan. It should also include

references to places that have been rich sources of information.

Another reason for laying emphasis on the book being open ended is that———

Much of the information I was collecting has untill recent times been in widespread oral circulation. In this form it is highly responsive to the particular local environment situation that exists at the right time and place without great superfluity. However, institutionalising such information necessarily increases the organisational and bureaucratic barrier between the time, place and need, and the relevant information. This is obviously a bad thing and I tried to avoid this to some extent by organising the information in an ordered but open-ended way, trying to present an information handling system that could be re-ordered and extended by those who came across it rather than being a 'closed book'.

To try to show, to some extent, how cheap and simple the techniques involved in the construction of a reasonably comfortable owner built home and in obtaining the food requirements of the human body can be.

.....

Specific monetary costing would be irrelevant here but I aimed to keep capital costs for any particular project well within a few hundred pounds. It seemed to me that this kind of money is available to almost anyone with the will to work hard save for a few months. In this way I hoped to avoid making suggestions that only applied to the richer classes of our society.

Specific costs are seen as irrelevant because of the great variance that will be found in every particular geographical situation. Most of the techniques could be done for very little money indeed if enough labour and luck in finding the necessary materials can be found. Another reason for not including many particular costings is that of price changes. Fluctuations in market prices are very difficultsto foretell and can be very misleading over shorter periods than one year.

The 'cost' I aim to display is a broader concept involving the whole process involved and its aesthetic ramifications. Cost might almost be

interpreted ad 'to give some idea of what is involved qualitatively and quantitavely in getting it together.' Again I have made great assumptions here about what is common knowledge (e.g. qualability of polythene sheet.) or easily obtained in the high street etc. Such things as nutritional theory are on the borderline here and I decided to include this particular aspect in the foodbook for completeness. The general angle was to concentrate on information not obtainable from common public sources.

To suggest such a subject is essentially one that must be experienced in practice rather than only academically.

.....

This means, in effect, that rather than constructing the book as one would normally would do with a basically theoreticallgaterial; it should be made, rather more, in the style of a manual. Not a manual in the sense of containing full step by step instructions, specifications or detailed costings but in the sense of a guidebook to experience. Relating to actual physical data. Where possible I drew from my own experiences of van living, earth wall buildings inflatable construction, squatting, synthesis of green leaf protein, fishing and so on to colour these areas with a feeling of their practical feasibility within, limited means. The presentation does not aim at any kind of blue print formula A source book for further investigations is more its image. This avoidance of blueprint [illegible] a deliberate attempt to give stimulation towards creative exploration rather than a rigid instruction manual.

A blueprint manual implies adherence to authorative advice whereas what I am to do is to show the range of practical possibilities for basic life supports if more research and practical exploration.

is undertaken.

To give immediate reinforcement to this idea, which is after all still this theo-retical, it is suggested, within the inside front cover of the scrapebook, that the reader should learn about the structure of the information by physically dismantling the book, re ordering and adding to it himself. In this manner he can immediately get into the action instead of being a passive consumer

To avoid overt analysis of the different techniques but to present simple factual information upon which the user may build his own.

.....

Implied viewpoints are unavoidable and I do not mean by this that I imagine the books to be idealogically unbiased. The thing to avoid, as I see it, is a premature analysis and choice of a particular technique, form, material etc. The comparative analysis included in the conclusive section comes dangerously near to this but is intended to be used as a framework to aid comparison over a wide range of criteria of a large number of different dwellings. The danger of a premature analysis would be the lack of broad based practical field tested information on any of the types, and anyway if the whole situation to be armed for is one characterised by its diversity perhaps an analysis can only be undertaken for a particular situation in which each of the types has been tried and tested.

The problem here was to provide a catalogue of information so that each part has similar emphasis but also to provide a flow through that is meaningful. This linear ordering must be based

on a no-qualitative characteristic which will be relevant to most of the information. Simplification of information without loss of clarity or any qualitative or aesthetic loses is a difficult technique of precis. The choice of words and images can at best not work for all people equally - but especially when they are concise to the point of being abrupt. For this reason a popular and light hearted lay-out helps to off set such curt presentation and make the whole move comprehensible.

An (implied) exploration of the nature of our needs as regards the basic life supports

.....

When we are talking about life supports and our needs it is certainly difficult to do so without refering to reality. This is usually done either by anthropologists who study other races with distant and foreign environments to their own, or by architects whose results are purely in terms of the existant culture and who do not try to explore new ground.

It is only by exposing ourselves to various situations in both theory and reality that we can learn how our needs relate to them.

Theoretical survey is first made that gives some insight as to where the most valuable practical experiences may be gained. From this process of exploration a solid basis is founded on which the explorer may place a clear analysis of his present dwelling and his projected future (dream names etc).

This will inevitably be an analysis of life style andhow well it fulfills the deepest needs.

Thus by examining in theory (and possibly experiencing in reality) a North American Indian Tipi you might realise how the spiritual ethos of this dwelling form is more pure and

powerful than the most luxurious apartment in New York. Now if your criteria for a dwelling include spiritual integration with the environment and your life style. This experience might well make you reconsider what kind of house you need.

You might go and live in a tipi yourself after doing this but it is hardly likely. What is more important is that having experienced another situation you have gained a perspective on your own situation.

Part 4. Process and limitations

* Collection of Information
* Choice of Information and categories
* Howto deliver.
* Preparation of copy and printing.
*Price/Contracts/Control.

Collection of Information

The whole matter of categorising and ordering the information in this area was complex and confusing at first; so I collected information in a loose leaf'ring binder' so the whole could be re-ordered and individual items relocated with ease. After some months it was possible for me to start writing checklists of requirements and to study the parameters I was to take to limit my research which was already getting so broad as to be out of hand (i.e. too much information too widely spread out). The criteria I developed were concerned with the whole arguement being taken on a down-to-earth, practical and real level. They were that of low cost methods which used materials that were easily available and techniques that most people could master, concentrating on the climatic and geographical conditions in Britain.

Libraries Exhibitions and museum experts were visited all over the country, gradually and at lengh information started taking shape.

Rather than having a framework from the start my search was prugmatic following one lead to find source of information, which would give me another lead. Often the dues were on an intuitive

or even psychic level—— a bookshop search, randomly made, revealing something that I did not even know that I was looking for. Much information although I was sure it must exist was not commonly available. Earth building techniques for instance have a wealth of fascinating information which was only revealed after careful search.

My ground was so general that many research information sources would find it difficult to help as unless I had a specific question or reference. Many interesting areas have not been published at all; to my knowledge there is nothing on tree houses and very little on topiany. Both subjects I imagine would raise a great deal of interest but apparently they have not. why? The method of information gathering is almost as important to the arguement as the information. The collection was biased by the fact that I was living in a van during this period. I feel it was essential to become part of what I was doing, especially as it was meant to be practically applicable, rather than be an acedemic outsider pretending to be one of the boys.

Choice of Information and Categories

Information was collected if it seemed anywhere near to the criteria mentioned on the previous pages and filed. It was then studied in a comparative fashion and things that best seemed to fit in with the idea were ring bound. Check lists of materials and techniques made with the help of friends revealed new areas of search. After some time it became clear that certain areas within each category of shelter, food and (the at present defunct) energy where more important in relation to the resources of the British Isles than were others. These were Earth building techniques, wild plant food, and energy from the wind. Currently there is a lot of academic interest in these areas but when I was collecting information there was little, so a special effort was made in each of these areas to dig out all available information, which going on the feedback I have received at present, I did successfully.

Information that was common knowledge but fitted into the pattern was included only if it served to make the sense of the whole essentially complete. An example of such a thing was recipes, many excellent recipe books are available and it seemed

a waste of time to get into this. Aquaculture on the other hand was another kettle of fish and the information here is not at all easily available. So I concentrated on categories that seemed as if they would be more informative. Other categories, although useful, were ignored because they were peripheral to the main area. An instance of this type is living on water which is peripheral to the main area of study and too large to be done briefly. So not coming up with the required detail in time it had to be omitted.

The necessary precis of information was stated as the information was collected by way of incisive (!) note-making, sketches, photocopies, of images and cut ups. (A real scrape book in fact.)

One of the most fascinating things about a novel and general collection ofthings is the manner in which one goes about imposing an order upon thèmgs

First method I used in shelter was by material and by technique. This had the difficulty of some 'techniques' without characteristic materials (e.g. squatting) and materials with any special technique. (e.g. wood) Food was ordered by activity and functional aorder in which they are done seasonally. This works well apart from things like air, recipes and other more continuous or abstract things. The next method tried with shelter was by level of technology. Or by asking how primitive? Apart from being very vague in any fine detail, every decision was mescapably controversial. Finally I ended up categorising by a rough weight/bulk/mobility criteria. Things such as caves and squatting caused difficulty here. I decided rather arbitrarily that with caves you just walked in with your clothes so they came in the beginning whilst the whole squatting/ urban/legal scene was altogether heavy so it went at the back. Details of ordering were settled by the limitations of the media printing process which I have already mentioned.

Food was finally ordered by way of physiological priority i.e what was primarily essential, and so on.
This works out with, a knowledge of what to eat first, followed by water through plant food, animal food, food processing, to waste disposal.
Anomalies were air of which I had only had 2 sides (anyway is it food?) and some miscellaneous such as buying. These were again taken care of by the sectional balance with each colour print.

How to deliver?

The information coming up seem positive, useful and not easily available. I felt it would be good to get it about in some way. Precedents had been set in similar areas in the U.S with whole Earth catalogue and many other practical books such as Domebook 11 and domecookbook. Several British magazines print articles of practical use from time to time but it seemed necessary to have a primary concentration of information. Magazine articles drift away and are lost when most needed.

Having come across a good body of knowledge, and put it together as a scrapbook, I showed the 'shelter' part to Bill Butler in Brighton who was very interested and said he would like to publish it, and condition being that I had to produce it to the stage from which it could be printed. It was to be printed as loose-leaf coloured information sheets printed an A1 litho plates; it ended up bound because of the difficulty of handling 128 pages of loose leaf commercially. All the complexities of printing and publishing a book with publishers agreements, legal matters, layout, graphics, platemaking, photographic work,

ink types, paper types, folding, identification, printers instructions, paste up and so on, were now learnt or experienced.
I would have prefered to print it myself and distribute it so that the price could be very low but there is a limit to what a single person can achieve with his own direct labour, so I decided that the disadvantages (not to mention the contradiction) of commercial delivery were outweighed by the advantages of getting the information out quickly before it was obsolete. Bill Butlers UNICORN press distributes to the avante garde and youth culture audience so this seemed to be a reasonable market to be able to act upon any information that seemed relevant.

Preparation of copy and printing

Some of the design difficulties encountered in the integration of the access/colour coding with the production techniques have already been mentioned. The limitations on what was possible dictated the sectional balance of information between colour sections. Another complication of ordering the information was that the pages needed to be autonomous if they're was to be the possibility of re ordering them and still keeping the sense. The result had to be a compromise which resulted in information being squeezed up or spread out. Copy had to be prepared with the minimum of fancy work (ie photographs to be screened, reductions, resolutions, colour takes, inbook illustration etc.) So that the cost would be kept down. Lack of every facility such as a typist, copy reader, drawing office and so on meant that the style was primitive but this was o.k. as it fitted the subject matter and even seemed to encourage the arguement. It certainly wasn't anything highly technological anyone with a rapidograph drawing pen and clean hands could do it. If they could summon the energy. (you do need a lot of energy)

The printers were friendly which was good because they had never seen anything like it before and I had become so involved in the information retrieval

bit that I hadn't even given them any page numbers. Lots of collaboration helped and we had few printing errors in shelter and less in Food.

Price/Contracts/Control

Shelter was unicorns first full book publication so there was little business tradition. Fearing gross misunderstandings and financial disaster I decided to draw up a publishing agreement myself. Research in a local library yielded most of the legal principle of publishing agreements, so I draw up a document to give me the best deal and most control I could get. This was signed after much arguement and later changed by Mr. Butler to an agreement that was fairer to him.

Publication price was of some concern as nobody was going to dismatle a book that cost them their weeks savings. However I soon learnt that cutting cost unreasonably and surviving in the hard business world as publishing certainly is, are not compatible. Mr. Butler has agreed that the series could grow to become more thorough and comprehensive. This fits into my ideas as a whole very well as it means that anybody wishing to submit reasonable manuscripts on related topics to UNICORN has a good chance of seeing them published. There are already a paperhouse book, an access catalogue, and squatting booklet being prepared. It would be good to see the thing grow.

CONCLUSION.

* A Comparative analysis of shelter types.

* Its possible, its better, lets try it!

ROUGH ASSESSEMENT.

COMPARATIVE ANALYSIS.

AREAS OF ASSESSEMENT (SEE SEPARATE SHEETS FOR DEFINITION/CLARIFICATION OF AREAS)

	MOVE? BULK/WEIGHT	STABILITY	RAIN PROOFNESS	INSULATION (HEAT)	SOUND QUALITY	DAMP PROOFNESS	VENTILATION	EASE OF D.I.Y.	USER EXPRESSION POSSIBLE	COST	MATERIAL AVAILABILITY	LIFE SPAN	FIRE RISK	ACTIVITY RANGE	CULTURAL LEGAL POSSIBILITIES	CAMO-FLAGE	CULTURAL SHOCK	DENSITY POSSIBLE	RE-CYCLABLE	HIGH TEC. LOW TEC	
CLOTHES	–	0/5	0/4	0/5	2	0/3	0/5	5	3/5	4	5	A/B	3	0/3	4/5	0/5	0/5	0/5	5		
CAVES	A	5	3/4	2/3	5	1/5	1/4	5	4/5	5	2	A	5	4	3	2/4	4	5	5	A	
SQUATTING	A	1	4	2/3	0/5	1	1/4	5	4/5	5	5	A	5	4	3	2/4	4	5	5	A	
SIMPLE LEAN-TO	B	1/3	2/3	1/2	1	1	2	4	4	5	4	A	3	2	2	4	2	2	4	A	
SHELTER TENT	B	1/2	2/3	1/2	1	1	2	4	4	5	4	A	3	2	2	4	2	2	4	A	
RAINSHELLS	B	2	3	2/3	1	1	2	4	2/3	4	4	A/B	3	2	2	4	2	2	4	A	
CORACLE	C	2/3	3	1/2	1	2/3	1	2	1	3	4/5	B/C	3	1/3	1/3	4/5	2	2	4	A	
CAMPING TENT	C	2/3	3	1/2	1	2/3	1	2	1	3	4	B/C	3	1	1	4	2	2	4	A	
INFLATABLE SINGLE SKIN	D/E	3	3	3/4	2/3	2/3	0/3	0/3	1/2	4	4	A/B	3	2	2	4	2	2	4	A	
INFLATABLE DOUBLE SKIN	D/E	3	3	3/4	2/3	2/3	0/3	0/3	1/2	4	4	A/B	3	2	2	4	2	2	4	A	
VACUUMATIC	D/E	3	3	3/4	2/3	2/3	2/3	0/3	1/2	4	4	A/B	3	2	2	4	2	2	4	A	
DOME TENT	D/E	4	4	4	4	4	4	4	4	5	5	A/B	4	3	3	4	3	3	5	A	
BENDER TENT	D/E	4	4	4	4	4	4	4	4	5	5	A/B	4	3	3	4	3	3	5	A	
TIPI	D/E	4	4	4	4	4	4	4	4	5	5	A/B	4	3	3	4	3	3	5	A	
YURT	D/E	4	4	4	4	4	4	4	4	5	5	A/B	4	3	3	4	3	3	5	A	
PLASTIC FOAM DOME	D/E	4	4	4	4	4	4	4	4	5	5	A/B	4	3	3	4	3	3	5	A	
VAN	E	1/2	1	1	1	1	1	1	1	2	2	A/B	2	1	1	2	1	1	2	A	
TRAILER CARAVAN	E/F	2/3	2/3	3/4	3/4	2/3	2/3	2/3	2/3	3	3	B/C	3	2/3	2/3	3	2/3	2/3	3	A	
SHED	E/F	3/4	3/4	3/4	3/4	2/3	2/3	2/3	2/3	3	3	B/C	3	2/3	2/3	3	2/3	2/3	3	A	
PAPER PODS	E/F	2/3	2/3	3/4	3/4	2/3	2/3	2/3	2/3	3	3	B/C	3	2/3	2/3	3	2/3	2/3	3	A	
GEODESIC: PLYDOME	E/F	2/3	2/3	3/4	3/4	2/3	2/3	2/3	2/3	3	3	B/C	3	2/3	2/3	3	2/3	2/3	3	A	
GEODESIC: ALUMINIUM	E/F	2/3	2/3	3/4	3/4	2/3	2/3	2/3	2/3	3	3	B/C	3	2/3	2/3	3	2/3	2/3	3	A	
GEODESIC: CAR TOPS	E/F	2/3	2/3	3/4	3/4	2/3	2/3	2/3	2/3	3	3	B/C	3	2/3	2/3	3	2/3	2/3	3	A	
LOG CABIN	F	4	4	4	4	4	4	4	4	5	5	A	5	4	4	5	4	4	5	A	
POLE construction	F	2	3/4	3/4	3	2/3	2/4	4	2/3	3	3	B	4	3	3	4	3	3	4	A	
THATCH	F/G	4	3	5	0/4	3/4	2/4	3	3	4	4	B	4	3	3	4	3	3	4	A	
TREE HOUSE	F/G	4	3	5	0/4	3/4	2/4	3	3	4	4	B	4	3	3	4	3	3	4	A	
FERROCEMENT	F/G	4	3	5	0/4	3/4	2/4	3	3	4	4	B	4	3	3	4	3	3	4	A	
WATTLE & DAUB	G	2/3	3	4	4	4	4	4	4	5	5	C	4	3	3	4	3	3	4	A	
TURF WALLS	G	2/3	3	4	4	4	4	4	4	5	5	C	4	3	3	4	3	3	4	A	
ADOBE BRICKS	G	2/3	3	4	4	4	4	4	4	5	5	A/B	4	3	3	4	3	3	4	A	
PISE DE TERRE	G	2/3	3	4	4	4	4	4	4	5	5	C	4	3	3	4	3	3	4	A	
STONE CROFT	G	2/3	3	4	4	4	4	4	4	5	5	C	4	3	3	4	3	3	4	A	
EARTH & STONE	G	2/3	3	4	4	4	4	4	4	5	5	C	4	3	3	4	3	3	4	A	
CONCRETE SLAB	G/H	3/4	4	4	4	4	4	4	4	5	5	C	4	3	3	4	3	3	4	A	
DUGOUT	H	3/4	4	4	4	4	4	4	4	5	5	C	4	3	3	4	3	3	4	A	
CAVE	H	3/4	4	4	4	4	4	4	4	5	5	C	4	3	3	4	3	3	4	A	
SEMI D. 11" BRICK average council quality	G/H	2/3	3	4	4	4	4	4	4	5	5	C	4	3	3	4	3	3	4	A	
18 STOREY R.C. FLATS	G	2/3	3	4	4	4	4	4	4	5	5	C	4	3	3	4	3	3	4	A	

Within the aims of the manual 0 = "poor" 5 = excellent
A-Z grades have no qualitative grading connotation.

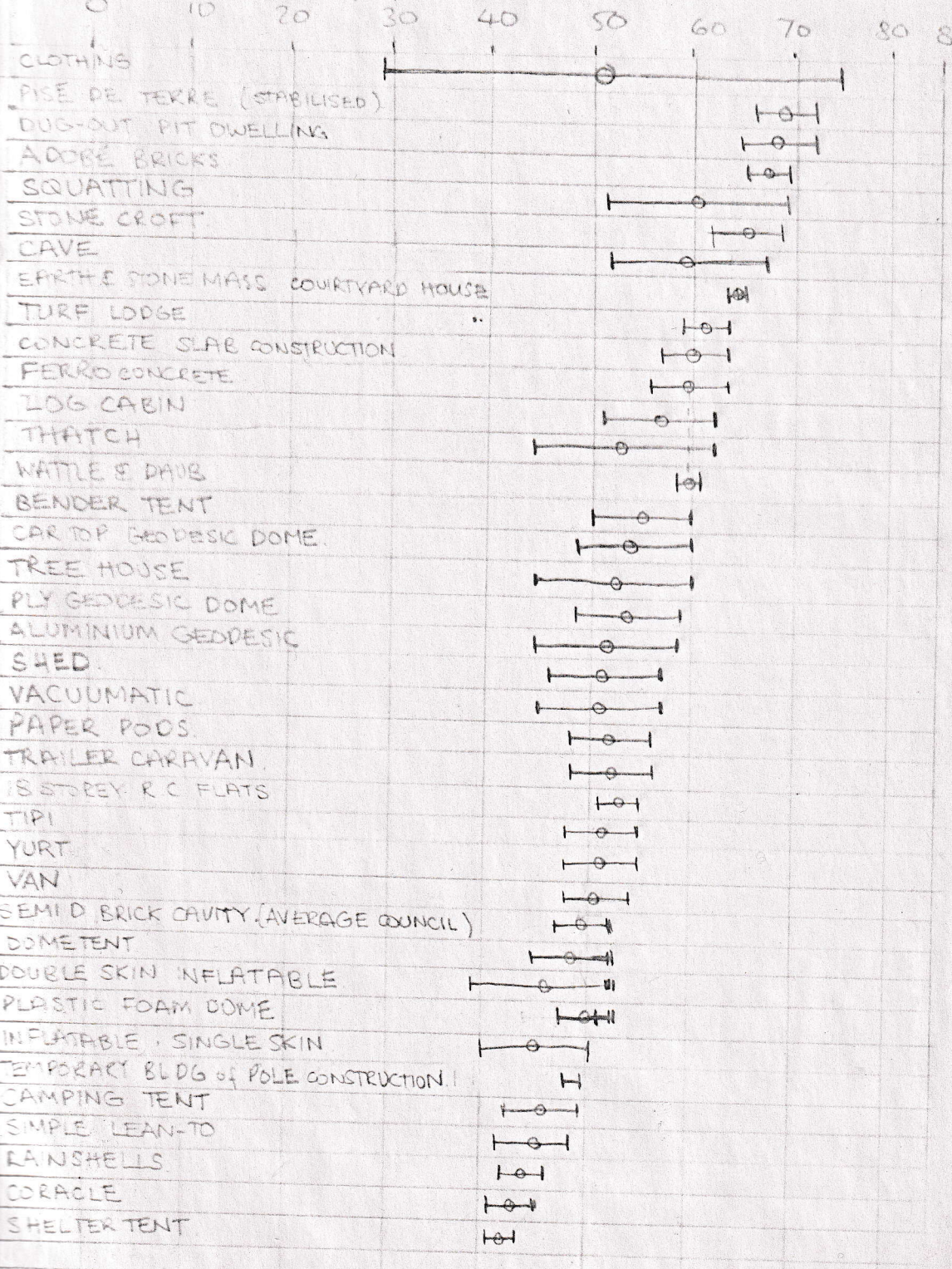
COMPARATIVE ANALYSIS

ROUGH ASSESSEMENT:

COMPARATIVE ANAYSIS

compared in 17 ways: structural stability, rain proofness, heat insulation, sound quality, damp proofness, ventilation, ease of DIY, user expression possible, cost, material availability, fire risk, Activities possible within, cultural/legal feasibility, camouflage, culture shock, density possible, recyclability.

On 17 counts @ 5 possible marks = possible total 85 marks (perfect dwelling?)



Note: Most of these dwellings have properties peculiar to themselves that would set them above the others; when those properties were required. eg. use of geodesic geometry by U.S.A. hippies as a symbol of earth peoples rebirth or of the lightweight tent by the hiker.

ROUGH ASSESSEMENT:

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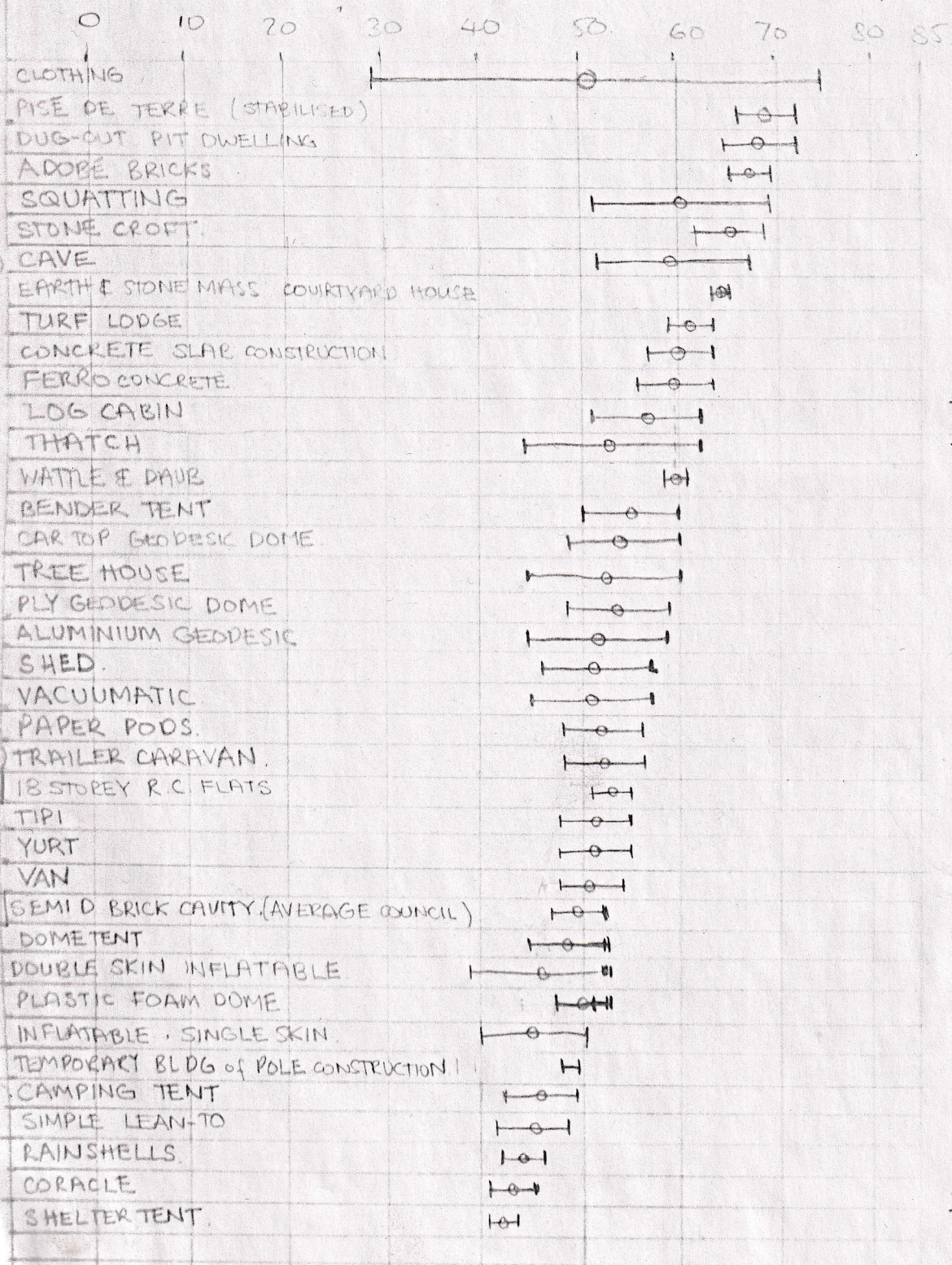

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COMPARATIVE ANALYSIS

C O M P A R A T I V E A N A L Y S I S

DEFINITION AND CLARIFICATION OF AREAS OF ASSESSEMENT

within the aims of this manual 0= poor 5= excellent
A - Z grades have no qualitative meaning.

COMMENT

GRADE

An interesting anomaly here is that although houses of earth, stone, log, are very heavy the materials are found in situ; so that if they can be erected with reasonable speed/ease (e.g. sod house + lean-to) they may be regarded as weightless or the weight of the imported tools only; taking this into account it is the light weight high tec. items that are the heaviest in time/mass/ energy.?

Move? bulk/weight — no roads

A = weightless
B = pocket
C = back (30 - 60lbs) — needs roads
D = can be carried
E = car, van or truck
F = lorry's
G = has to be demolished — immobile
H = immobile

Stability will of course depend on the skill and experience of the builder to a great extent; but the monolithic structure of ferrocement is bound to be much more stable than a tree house of sticks.

Stability

0 = likely to fall down — blow away
1 = unstable
2 = Temporarily stable
3 = reasonably stable
4 = very stable
5 = never come down — indestructable

Again there will be much variation with the skill and experience of the builder. However plastic sheet technology makes it much simpler to rainproof primitive structures. Component buildings (as opposed to monolithic) are more likely to have water leakage. Geodesics need special care in sealing as roof and walls are one surface and the joints between triangles are suseptible to moving, then cracking and then leaking. A well thatched adobe hut will be much better to live in than a badly sealed and insulated space age dome.

Rain proofness

0 = none — wet
1 = small part protection
2 = leaking
3 = occasional leaks
4 = rarely leaks — dry
5 = never leaks

Heat insulation is best achieved by the formation of air gaps or cellularly trapped air. e.g. a camping tent will be twice as warm with a good flysheet. Thick fibrous materials will also be warm e.g. In the felt covered yurt thick rugs are hung on the interior walls. Another method of increasing both heat and sound insulation is by the use of thick walls e.g the dug out and pise de terre dwellings.

Heat Insulation

0 = none — cold + much fuel
1 = large fire needed
2 = fire needed
3 =
4 = lamp will heat
5 = body heat enough. — warm + no fuel

Sound insulation depends on mass and/or on discontinuity of structure along which sound might travel. On this count a massive wall of earth sods might be best. Sound Quality is more than just insulation; the form and rigidy of the house will give either pleasant or harsh acoustics. An uninsulated steal dome would sound 'tinney' whilst a bender tent might absorb the reverberations.

Damp depends greatly upon site, design and building of correct damp proof courses. However a building shell that rests directly on the ground will need much greater care in the choice of a dry site to keep from being damp than a dwelling that is built away from the ground c.f. tipi and van.

The necessary adjustable openings must be supplied before there can be good ventilation; However building forms such as the domes, yurt, tipi, have forms which encourage good air circulation. The single skin pneumatic uses blow air to maintain its stability. The pit dwelling with its long enterance passage has a designed in heat exchange (dug-out dwellings with the high insulation of massive wallsmay be kept warm and fresh with the minimum of heat.)

About the greatest satisfaction possible from expressive participation in a house is to direct the construction of it your self, but expression is also possible on the 'finished product' by painting, changing, adding bits, openings, destroying, climbing, lighting, decorating, changing the form etc. the more the better (?)

Cost is a difficult factor to accurately assess when materials are being scrounged, work is being done yourself, tools are borrowed, local materials are used. The actual money costs can be much lower than a whole economic costing taking into account labour time, energy, used, transport, new materials, etc. The cost estimate here is of actual money cost.

SOUND QUALITY

0 = no insulation + reverb ear
1 = slight insulation trouble
2 =
3 = reasonable
4 = good insulation
5 = good insulation + good sound quality sounds good

DAMP-PROOF

0 = none Rheumatism
1 = poor
2 =
3 = reasonable
4 = good
5 = no damp at all dry

VENTILATION

0 = none
1 = a little rather draughty suffocation
2 = ventilation not easy to control aches
3 = reasonable fresh air
4 = good v. little draught
5 = perfect no draughts

Do it yourself easy?

0 = made and erected by experts qauranteed quick
1 = erected by anyone
2 = workshop some skill
3 = good tool set
4 = simple tools common sense control satisfactio
5 = easy for anyone

USER EXPRESSION POSSIBLE

0 = uninpressionable impersonal
1 = small things done
2 = larger but limited
3 = reasonable
4 = freely 'plastic'
5 = stimulates complete involvement. human

COST

0 = over £200 priveliged
1 = 75 -200 ~~(or deprived)~~
2 = 30 - 75
3 = 10 - 30
4 = under 10
5 = free anyone

Note: costs for ~~lucky~~ 1/2 person 2/3 room dwelling i.e minimum consistant with reasonable shelter.

If people can't get a specified material easily; they'll build something else with materials that <u>are</u> available. (realism!)

Life span is an important factor in popular housing where return on capital is all important. It does not concern us here: accept perhaps as a real security concept more important to some people than others.

Certain dwellings are restricted in size by their innate nature. Particular examples are the Yurt, the tipi, the Tree House. Others are restricted by legal consideration; for example the van and the shed.

This grading is concerned with how easy will it be to build than to live in. Often it might be OK. but only in particular conditions. Outlandish or unusual dwellings will often not be acceptable to the nearby people.

Whether or not you can be seen/ or at least be obvious) is of practical importance if, as suggested above, your dwelling style conflicts with the cultural norm. ie if it can't be seen your less likey to be roped in.

Material Availability
0 = impossible to get — one only
1 = Obtainable with difficulty
2 = Obtainable in a few sites
3 = obtainable in many places
4 = obtainable most places
5 = easily obtainable in all localities. — local store

Life Span
A = under one year — Low security value
B = 1 -5 years.
C = 5-50 years
D = over 50 years. — ? high Security value

Fire risk
0 = bad risk: danger — Burn
3 = slight risk (acceptable)
5 = no risk at all — Not burn

Activity Range.
0 = quick shelter only — quick individual shelter
1 = sleeping
2 = sleeping, eating, reading,
3 = + handycrafts, games
4 = + several activity areas.
5 = + big meals, partys, communes etc. — permanent communal shelter

'Camouflage'
0 = sticks out like a sore thumb. — now they see it
1 = does not blend with surroundings
2 = blends well
3 = difficult to see.
4 = difficult to find — now they don't.
5 = impossible to find.

Cultural/Legal Hassle
0 = illegal or culturally unacceptable — illegal
1 = can be illegal : difficult regulations / bye-laws
2 = legal but difficult
3 = Culturally unpopular
4 = subtle deviance
5 = straight forward. — popular

How much will an ordinary, typical British life style have to change using a particular dwelling. This is a question of accessability. Large changes in short times can only be made by a small amount of people (?)

Through its properties of close packing, privacy, sound insulatio n materials, etc. Will the dwelling be suitable for high densities as well as more isolated places? The important concept here is privacy. People insulation. If structure will operate in a high density situation as well as alone it gives it broader scope and thus it is more valuable as a dwelling form.

Many so called primitive forms would benefit greatly from high technology services.e.g. nomads with short wave radio. Our housing needs have'nt changed much since primitive times (?) thats why many primitive technologies score highly. The possibilities of communication, speed and area of action have been opened up by modern technology - low tec. shelter shell with high tec. service = good modern house(?) This is a vague and dangerously over simplified reply to such an important concept of the planet/its resources/ our future. It is felt that some assessment however crude should be attempted.

Culture shock.
0 = impossible to adjust — "we couldnt possibly live like that"
1 = just possible to adjust
2 = big change
3 = reasonable change
4 = slight change — We're moving tomorrow.
5 = no change.

Density Possible
0 = completely isolated — lonely & wild.
1 = nearby neighbour
2 = small group o.k.
3 = village
4 = town — Urban claustropho -bia
5 = city.

High Tec/Low Tec.
A = stone ironage — primitive
B = early industrial
C = recent industrial (chemical)
D = Now (electron tec.) — modern

Recycle
0 = cannot be reused/ recycled. — waste/ pollution
1 = some parts recycable
2 = most parts recycable (with difficulty)
3 = most parts recycable (easily)
4 = whole recycable
5 = easily and completely reusable/recycable. — earthship care.

CONCLUSIONS? (surely not)

Even taking into account the considerable disadvantages of the inaccuracy of this rough comparative assessment, it is interesting to see the high score of primitive technologies when this sort of broad based assessment is made. The first three dwellings are of earth; the next three dwellings are of stone. The Actual weight of these materials is not apparent when it is realised that they are usually on site, as stated earlier, needing only the time and energy of the future occupant with simple tools, to fashion.* The advantage of massive walls in stability, insulation, lifespan etc. have yet to be equalled by a popularly used and priced lightweight material. A little lower, after another earth material in the turf hut, there comes concrete and fero concrete the first products of a more sophisticated technology. They score well on their plasticity, impermability and strength but fall down from being best on cost and recyclability. Next come the warm wood materials, logs, thatch, wattle, bender tent, tree house, ply dome; in a position that seems to suit there status as medium weight organically derived materials. It is interesting to note that wattle and daub, a primitive equivalent of ferrocement, has an equal mean score to ferrocement!

Within this wood group is the first all metal car top dome, which score consistantly; coming down a little on price (mainly the cost of insulation, bolts and sealant) and lack of user expression with the rigid geometry.

* Please note: time and energy of erection isnot scoredl but taken to be within reason. e.g. during a summer.

Some people would deny a limitation here, welcoming the geometry as an overall discipline.

Further down the list comes the other Aluminium geodesic (high cost) next to the garden shed these being just ahead of the first high tec. low cost item the vacuumatic, this scores low on ease of D.I.Y. water and damp proofing, user expression (great in the area of general form only) and camouflage. All of these points could well be contested and in a few years when it is more developed and evacuating pumps valves etc are more easily available; then it may deserve a place near the top of the list.

Paper pods come after vacuumatic but this is really to vague an area of dwelling to assess seriously. Scores low on sound insulation stability and lifespan. Not seriously dis advantaged. Specific sophisticated examples might overcome these and get a much higher rating.

The trailer caravan, 18 storey R.C. flats, the Tipi, the Yurt the van and the semi Detached are next. Interesting as all (except the flats and semi D which are put in as a comparative control) are nomadic dwellings The tipi is a dwelling of perfection. Every detail of its structure is spiritually integrated with the ritual of Indian life. A fine balance of comfort/mobility with regard to the resources at hand. The steppes from which the Yurts come have very cold winters. The felt covered shape is warm its dome shape hugging close to the ground. The van is the ultimate in living mobile in a country witha good road system.

CONCLUSIONS? concluded.

The trailer caravan is capable of being equal to any modern home losing only manoevrability and camouflage to the small van: Although of course its towing vehicle may be used separately.

The flats and semi detached house did'nt do very well, but then as we all know the housing situation is bad. They came down heavily on cost, material availability, user expression, ease of D.I.Y. fitting into the landscapes and infact only just beat the tents.
The dome-tent, double skin inflatable single skin inflatable and camping tent don't come up to the environmental quality of heavier dwellings; but their properties of temporaryness, lightness, speed of erection are special but didn't score as they are needed in particular rather than general circumstances.
It is possible to live 6 - 8 months of the year in a tent in Britain.
The inflatables also have properties of their own that are incomparable. The lack of hard edges and softness of surfaces make it the most tactile and sexy building type.
Within thisgroup was the plastic foam dome which I rate much higher personally. It scored loudly on cost, availability, ease of D.I.Y. recyclability, camouflage. In future years when the spray gear is easier to get and to handle andthe material cheap I feel this could be a major dwelling construction method along with vacuumatic and paper. It can be sprayed to take many amazing forms its insulation valve is very high, and its super lightness saves on foundation costs.

Also surrounded by the tent group is the temparary building of pole construction - this is really crude with old telegraph poles, straw bales and plastic sheeting but scoring well on insulation, material availability ease of construction cost and recyclability.

After this and lastly came the delightfullbasic shelters: - simple lean to of boughs plastic rain shells, the coracle and the shelter tent which is nothing more than an impermiable sheet of material. Even so it is only ten points below the semi D with nearly half marks(!)

This kind of rough comparison can hardly be used to prove anything very useful. However this is useful in itself in providing a framework by which an individual can help himself to rationally decide on what shelter is suitable for his own use by altering the emphasis and priorities of the criteria possibly even adding more criteria of his own.

Food production techniques can not be compared in this manner a variety of possibilities arise from the geographical conditions of your locality. Choose one that suits your own tastes and dietory needs.

Please note: 'delight' is not scored.

Conclusion

Whatever onethinks of the style and functional perfomance of the houses and food we normally consume the processes involved are staggeringly inefficient when one looks at the energy/mass that have been used to produce them. When people stopped making their own houses (and producing their own food) as a cultural norm, the idea was that industry could construct houses for them more efficiently and with better performance leaving them time to do other things. What happened was that the investors created one of their many-layered industrial structures from which the cream of profit could be removed at every stage.

An average modern house uses 200 tons of materials transported often hundreds of miles. Raw materials move through a vast energy consuming cycle the only human arguement for which is that it gives more people work. Presumably so that they can afford one of the expensive end products, overwhich they have little say! A similar tale may be told regarding our food.

There are in almost every locality resources naturally available which with a minimum of imported material can be made to produce at the highest quality we deserve, allour basic life supports using simple techniques and tools, available to all people.

Cost of such systems in terms of 'money' is very low.

Satisfaction is complete

(disadvantage - no profit for the investors?)

The buildings that are nowadays highly prized for their aesthetic and symbolic appeal are the picturesque whitewashed country cottages. The mystification of building techniques is so complete that many people do not know that they were built over a summer in a workers spare time by unskilled labour with mud from the actual site.

With what we know today we could do much better.

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The End

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